REMARKS

The claims have been amended to improve the style of this application.

Claims 1 and 8 - 10 have been rejected as being anticipated by Ingle.

Claim 1 has been amended, and new independent claim 11 has been added to set forth that the step of mixing silicon with a catalyst is performed in a presence of a gas having a reducing action. Support for the mixing being performed in the presence of hydrogen or other gases which have a reducing action can be found in the present specification on page 5 lines 5 - 11. Applicant has reviewed the reference of Ingle, and finds no teaching nor suggestion of a mixing step of silicon and catalyst which is performed in the presence of a gas having a reducing action. Since this feature is not taught nor suggested in Ingle, Ingle fails to anticipate all of the features of claims 1 and 11. These claims therefore cannot be anticipated by Ingle.

Applicant has reviewed Ingle, and notes that Ingle teaches silicon and a catalyst, however Ingle is silent as to any particulars of mixing. Ingle gives no suggestion or motivation to a person of ordinary skill in the art to mix silicon and a catalyst in the presence of a gas having a reducing action. Therefore Applicant finds no reason why a person of ordinary skill in the art would be led to modify Ingle to mix in the presence of a gas having a reducing action. Claims 1 and 11 cannot be obvious in view of Ingle.

New independent claim 16 sets forth that the silicon is mixed with the catalyst to have the catalyst adhere to a surface of the silicon. Support for this can be found in the specification on page 4 lines 25 - 27 and page 6 lines 3 - 5. Applicant has reviewed Ingle, and finds no teaching nor suggestion of any mixing which is performed to have a catalyst adhere to a surface

of silicon particles. Since this feature is not taught nor suggested in Ingle, claim 16 cannot be anticipated by Ingle.

Claims 1 - 10 have been rejected as being obvious over Ingle in view of Chemical Engineers Handbook and optionally further in view of Breneman.

The rejection states that for the condition of the mixing of the catalyst and the silicon particles, it would have been obvious to one of ordinary skill in the art to optimize such condition to obtain the best results. However Applicant finds no suggestion or motivation in Ingle or any of the other references, that the conditions set forth in the present claims could be optimized to obtain better results. As described previously, Ingle is completely silent when with regard to any of the conditions of the mixing of a catalyst and silicon. It is only Applicant who has discovered conditions that could be varied to improve results. A person of ordinary skill in the art would have no indication from the prior art that the presence of a gas having a reducing action would be beneficial in the mixing of a catalyst and silicon. Applicant further finds no indication in the prior art that mixing a catalyst and silicon to have the catalyst adhere to the surface of the silicon would improve results. Therefore there is no suggestion or motivation in the prior art which would lead a person of ordinary skill in the art to optimize these conditions to obtain better results. Since the suggestion or motivation to optimize these conditions is not found in the prior art, the prior art cannot cause the present claims to be obvious. These claims therefore further define over the prior art.

Applicant notes that the use of a reducing medium, as set forth in claims 1 and 11 prevents or blocks the formation of an oxide layer on the silicon particles. Since such an oxide

layer cannot grow, direct contact between the catalyst and the silicon occurs, and leads to a higher degree of the catalyzed reaction. This is an improvement over the prior art, and Applicant respectfully requests patent protection for this improvement.

Claim 12 further sets forth that the mixing is performed to block the formation of an oxide layer on the silicon. Claim 12 therefore further defines over the prior art.

Claim 14 sets forth that the gas which has the reducing action includes one of hydrogen and carbon monoxide. Applicant finds no teaching nor suggestion in the prior art of a gas being present during a mixing where the gas is one of hydrogen and carbon monoxide. Claim 14 therefore further defines over the prior art. Applicant further finds no suggestion or motivation in the prior art to have either hydrogen or carbon monoxide present during a mixing, and therefore claim 14 cannot be obvious in view of the prior art.

Claim 15 sets forth that the mixing is performed in a temperature range of 100 - 400°C. Claim 19 sets forth that the mixing is performed at a temperature high enough to remove moisture residues from the silicon catalyst mixture. Support for this can be found in the present specification on page 5 line 30 - page 6 line 3. Applicant finds no teaching nor suggestion in the prior art of optimizing a temperature condition to obtain better results. Therefore these claims cannot be obvious in view of the prior art and further define over the prior art.

Claim 17 sets forth that the mixing is performed to comminute the catalyst. As described above, Ingle is silent with regard to how the mixing is performed. Applicant finds no suggestion or motivation in the prior art to perform the mixing to comminute the catalyst or that such a mixing would provide better results. Therefore claim 17 further defines over the

prior art.

Claim 18 sets forth that the mixing is performed in the presence of an inert gas. Support for this can be found in the present specification on page 5 lines 13 - 15. Since Ingle is silent with regard to the mixing, there is no suggestion or motivation which would lead a person to perform in the mixing of Ingle in the presence of an inert gas. Since it is only Applicant who has set forth this condition, claim 18 therefore further defines over Ingle.

Claim 20 sets forth that the reacting is performed in a fluidized bed. Ingle does not describe performing any reacting in a fluidized bed. Therefore Ingle cannot anticipate claim 20. The mixing of the catalyst with the silicon to have the catalyst adhere to the silicon, is very beneficial when the reacting is performed in a fluidized bed. Applicant has discovered that if the catalyst can be adhered to the surface of the silicon, a more optimal and efficient reaction can occur in a fluidized bed.

If the silicon is not intensively mixed with the catalyst then the silicon and the catalyst do not adhere to each other, and the silicon and catalyst can be separated in the fluidized bed. Thus much of the catalyst can be lost. It is only Applicant who has discovered the particular advantage of the synergy between having a catalyst adhered to silicon, and then having the reacting performed in a fluidized bed.

The present invention is an improvement over the prior art, because the efficiency of preparing trichlorosilane is increased. This reduces the cost of trichlorosilane which then will reduce the cost of semiconductor devices such as solar cells and computer chips. This reduces the price of solar cells and computer chips, which are beneficial to both the manufacturer and

the consumer. Applicant respectfully requests patent protection for this improvement.

If the Examiner has any comments or suggestions which would further favorable prosecution of this application, the Examiner is invited to contact Applicant's representative by telephone to discuss possible changes.

At this time Applicant respectfully requests reconsideration of this application, and based on the above amendments and remarks, respectfully solicits allowance of this application.

Respectfully submitted
for Applicant,

By: _____
Theobald Dengler
Registration No. 34,575
McGLEW AND TUTTLE, P.C.

TD:tf
70965.2

DATED: December 29, 2003
SCARBOROUGH STATION
SCARBOROUGH, NEW YORK 10510-0827
(914) 941-5600

SHOULD ANY OTHER FEE BE REQUIRED, THE PATENT AND TRADEMARK OFFICE IS HEREBY REQUESTED TO CHARGE SUCH FEE TO OUR DEPOSIT ACCOUNT 13-0410.